

UNITED STATES DISTRICT COURT  
WESTERN DISTRICT OF NEW YORK

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MIAMI PRODUCTS & CHEMICAL CO.,  
On Behalf of Itself and All Others Similarly  
Situating, et al.,

Plaintiffs,

v.

OLIN CORPORATION, et al.,

Defendants.

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AMREX CHEMICAL CO., INC.,  
On Behalf of Itself and All Others Similarly  
Situating,

Plaintiff,

v.

OLIN CORPORATION, et al.,

Defendants.

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MIDWEST RENEWABLE ENERGY,  
LLC, On Behalf of Itself and All Others  
Similarly Situated,

Plaintiff,

v.

OLIN CORPORATION, et al.,

Defendants.

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**DECISION AND ORDER**

1:19-CV-00385 EAW

1:19-CV-00386 EAW

1:19-CV-00392 EAW

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MAIN POOL AND CHEMICAL CO.,  
INC., On Behalf of Itself and All Others  
Similarly Situated,

Plaintiff,

1:19-CV-00393 EAW

v.

OLIN CORPORATION, et al.,

Defendants.

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PERRY’S ICE CREAM COMPANY, INC.,  
On Behalf of Itself and All Others Similarly  
Situated,

Plaintiff,

1:19-CV-00403 EAW

v.

OLIN CORPORATION, et al.,

Defendants.

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### **INTRODUCTION**

Plaintiffs Miami Products & Chemical Co. (“Miami Products”), Amrex Chemical Co., Inc. (“Amrex”), Main Pool and Chemical Co., Inc. (“Main Pool”), Midwest Renewable Energy, LLC (“Midwest Renewable”), Perry’s Ice Cream Company, Inc. (“Perry’s”), and VanDeMark Chemical, Inc. (“VanDeMark”) (collectively “Direct Purchaser Plaintiffs” or “DPPs”) allege that defendants Olin Corporation (“Olin”), K.A. Steel Chemicals, Inc. (“K.A. Steel”), Occidental Chemical Corporation (“OxyChem”),

Westlake Chemical Corporation (“Westlake”), Shintech Incorporated (“Shintech”), and Formosa Plastics Corporation, U.S.A. (“Formosa USA”) (collectively, “Defendants”) have violated Section 1 of the Sherman Act, 15 U.S.C. § 1, by entering into a combination or conspiracy to artificially reduce or eliminate competition for the pricing of caustic soda sold to purchasers in the United States. (Dkt. 51). In DPPs’ words, they “allege an industry-wide cartel involving the five largest U.S. producers of caustic soda (and their predecessors) to increase prices through parallel price increase announcements from August 2015 through December 2018.” (Dkt. 667 at 12).<sup>1</sup>

DPPs seek class certification (Dkt. 474) and have also moved to strike and exclude certain opinions offered by Defendants’ expert witness, John H. Johnson IV, Ph.D. (Dkt. 570). By contrast, Defendants contend that this matter is not suitable for class certification and have jointly moved to exclude certain opinions offered by DPPs’ expert witness, Russell L. Lamb, Ph.D. (Dkt. 573). Formosa USA and Shintech have separately filed motions to strike portions of Dr. Lamb’s testimony. (Dkt. 567; Dkt. 572).<sup>2</sup>

For the reasons that follow, the Court denies DPPs’ motion for class certification. The Court resolves the parties’ motions to strike expert testimony only to the extent

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<sup>1</sup> When referencing the page number(s) of docket citations in this Decision and Order, the Court cites to the CM/ECF-generated page numbers that appear in the upper righthand corner of each document and not to the original pagination.

<sup>2</sup> DPPs have submitted motions for preliminary approval of proposed settlement agreements with Formosa USA, Westlake, and Shintech. (Dkt 702; Dkt. 710; Dkt. 720). The Court advised the parties on November 27, 2023, that it would not consider the adequacy of these proposed settlements until it had resolved the pending class certification motion.

necessary to enable it to resolve the class certification motion, as described below, and otherwise denies those motions as moot.

## **BACKGROUND**

### **I. Factual Background**

#### **A. Caustic Soda Manufacturing and Sales**

Caustic soda, also known as sodium hydroxide or lye, is a commodity chemical sold in solid and liquid forms. (Dkt. 51 at ¶ 42). It is used by customers in a variety of industries, including: paper, pulp, and cellulose; chemical production; soaps and detergents; aluminum; food processing; water treatment; textiles; mineral oils; recycling; and pharmaceuticals. (*Id.*). Caustic soda is a globally traded chemical, and the majority of worldwide production occurs outside the United States. (Dkt. 625-7 at ¶ 29).

Caustic soda is a co-product of chlorine—meaning that it cannot be produced without also producing chlorine—and is manufactured in a “chlor-alkali manufacturing process.” (*Id.* at ¶ 79). There are various forms of this manufacturing process—diaphragm cell, membrane cell, and mercury cell—which produce different forms and grades of caustic soda. (Dkt. 51 at ¶ 42). Chlorine is more volatile and toxic than caustic soda and is accordingly harder to store and transport. (Dkt. 625-7 at ¶ 81). Thus, as a practical matter, chlor-alkali producers’ ability to produce caustic soda is limited by their ability to use or sell the co-produced chlorine.

DPPs estimate that Defendants “produce at least 90% of the domestic supply of Caustic Soda.” (Dkt. 51 at ¶ 45). During the proposed class period (October 1, 2015, through December 31, 2018), “the total volume of commerce in the market for caustic soda

in the United States accounted for by Defendants was approximately \$9.81 billion.” (Dkt. 624-2 at ¶ 54).

According to DPPs, there is a “unique process for determining prices” in the domestic caustic soda industry. (Dkt. 667 at 15). Caustic soda is generally sold pursuant to contract, “with limited amounts sold under freely negotiated ‘spot’ sales.” (Dkt. 624-2 at ¶ 49). Caustic soda contracts may employ different pricing mechanisms—for example, the parties may agree upon a fixed price and a volume target for a period of time, they may tie the price formulaically to a pricing index or indices<sup>3</sup>, or they may enter into long-term contracts for fixed prices, “linked to changes in underlying cost factors, priced on an ECU [electrochemical unit] basis, or based on a ‘market basket.’” (*Id.*). Contracts tied to a “market basket” are priced based on the average selling price realized from some other set of agreed-upon contracts. (*Id.* at ¶ 49 n. 131).

“Contracts between caustic soda producers and their customers often can involve detailed and complex terms.” (Dkt. 625-7 at ¶ 28). Because of the manner in which caustic soda prices are negotiated, “customers paid a variety of prices for both diaphragm and membrane caustic soda” during the proposed class period. (*Id.* at ¶ 26). As an example, in October of 2015, prices per dry short ton (“DST”) of diaphragm grade caustic soda

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<sup>3</sup> “Buyers and sellers of caustic soda utilize services of third-party consultants and reporting agencies to access information about caustic soda prices and market activity.” (Dkt. 624-2 at ¶ 50). Agencies including IHS, Argus Media, and ICIS regularly publish reports on the caustic soda market that include price reporting. (*Id.*). IHS in particular publishes “three different price indices that were widely used among producers and buyers of caustic soda in the U.S.” (*Id.* at ¶ 51).

ranged from \$210 to approximately \$626, while membrane grade caustic soda cost between \$275 and \$675 per DST. (*Id.*).

During the relevant time period, Defendants would periodically send out price increase announcements—that is, letters notifying their customers that they desired to increase the price of caustic soda. (*Id.* at ¶ 46). “Contract terms frequently dictated that Defendants must make a price increase announcement in advance of any proposed changes in prices.” (*Id.*). A price increase announcement would not automatically result in an increase in customer prices, but would instead trigger negotiations between the seller and the buyer. (*Id.* at ¶ 47). “Customers’ price movements following price increase announcements varied across Defendants, across products, and across announcements.” (*Id.* at ¶ 54). DPPs contend that there is a causal chain from price increase announcements to increased “spot prices or prices under freely negotiated contracts” to the “indices used to set caustic soda prices formulaically for a majority of the industry[.]” (Dkt. 667 at 15).

#### **B. Alleged Anticompetitive Behavior**

In the consolidated complaint, DPPs allege that Defendants “conspire[d] and combine[d] to restrict domestic supply; to fix, raise, maintain, and stabilize the price at which Caustic Soda was . . . sold; and to allocate customers in violation of Section 1 of the Sherman Act, 15 U.S.C. § 1.” (Dkt. 51 at ¶ 3). “In sum, Defendants [allegedly] entered into an agreement or understanding to increase prices of Caustic Soda and not to compete on price for the business of each other’s customers.” (*Id.*). DPPs allege Defendants acted as “a collegial, cooperative cartel to limit supply to domestic customers and have misleadingly justified price increases,” and that they engaged in price increase

coordination, co-producer agreements, price index manipulation, customer and market allocation, and information exchanges. (*Id.* at ¶ 88-103).

In their motion for class certification, DPPs argue that Defendants engaged in the following anticompetitive behavior: “announcing and implementing very similar and, at times, nearly identical price increases using pretextual justifications; raising prices in a period of relatively flat demand, flat or declining costs, and excess supply; limiting supply and putting customers on order control or allocation when inventories of Caustic Soda were abundant; and maintaining stable market shares” between October 1, 2015 and December 31, 2018 (the proposed class period). (Dkt. 622 at 24). DPPs contend that “the alleged cartel was effective in raising Caustic Soda prices generally by 9.6% above the level that would have existed absent the alleged cartel.” (*Id.* at 24-25).

In their reply, DPPs state that the core issue raised by their class certification motion “is whether common evidence will be relied upon to prove or disprove Plaintiffs’ allegations that the 14 price increase announcements issued in close proximity by Defendants across a three-year period were the product of collusion and against each Defendant’s individual self-interest, and that those price increases succeeded in elevating prices class wide, causing harm to all or virtually all class members.” (Dkt. 643 at 13). They disclaim any allegation of a supply restraint conspiracy (Dkt. 643 at 17), stating that they “allege an agreement among Defendants to fix, raise, stabilize, and maintain caustic soda prices. This agreement was effectuated through coordinated price increase announcements and other anti-competitive conduct designed to support price increases and stabilization, such as through information exchanges and re-marketing agreements which

involved extensive communications among Defendants regarding the supply of caustic soda.” (*Id.*).

In their post-hearing brief, DPPs describe the alleged anticompetitive conduct as “an industry-wide cartel involving the five largest U.S. producers of caustic soda (and their predecessors) to increase prices through parallel price increase announcements from August 2015 through December 2018.” (Dkt. 667 at 12).

**C. Defendants**

Olin is a “leading vertically-integrated global manufacturer and distributor of chemical products and a leading U.S. manufacturer of ammunition.” (Dkt. 624-2 at ¶ 35). Olin acquired K.A. Steel, a privately-held distributor of caustic soda and other chemicals, in August of 2012. (*Id.*).

OxyChem is a wholly-owned subsidiary of Occidental Petroleum Company, and produces and markets basic chemicals and vinyls. (*Id.* at ¶ 40).

Westlake is an international manufacturer and supplier of basic chemicals, vinyls, polymers, and building products. (*Id.* at ¶ 43).

Formosa USA is a vertically-integrated supplier of plastic resins and petrochemicals. (*Id.* at ¶ 45).

Shintech is a wholly-owned subsidiary of Shin-Etsu Chemical Co., Ltd., which is the largest manufacturer of polyvinyl chloride (“PVC”) in the world. (*Id.* at ¶ 47).

**D. The Direct Purchaser Plaintiffs**

Miami Products is a manufacturer of swimming pool cleaning products and water treatment chemicals. (Dkt. 625-7 at ¶ 103). It primarily purchases caustic soda and



chlorine to manufacture bleach. (*Id.*). During the proposed class period, K.A. Steel was the only defendant who sold liquid caustic soda to Miami Products, with sales amounting to \$320,254. (*Id.*).

Amrex is a wholesale chemical distributor that buys and then resells caustic soda to customers. (*Id.*). During the proposed class period, K.A. Steel was the only defendant who sold liquid caustic soda to Amrex, with sales amounting to \$448,336. (*Id.*).

Main Pool is a distributor of water treatment chemicals and equipment, which markets chemicals to wastewater treatment plants, water companies, commercial swimming pool operations, and other industrial businesses. (*Id.*). During the proposed class period, K.A. Steel was the only defendant who sold liquid caustic soda to Main Pool, with sales amounting to \$238,909. (*Id.*).

Midwest Renewable is an ethanol producer that uses caustic soda to clean the tanks and equipment used during the distillation process. (*Id.*). During the proposed class period, K.A. Steel was the only defendant who sold liquid caustic soda to Midwest Renewable, with sales amounting to \$535,529. (*Id.*).

Perry's is a manufacturer of ice cream and a distributor of frozen foods. (*Id.*). It did not directly purchase caustic soda from any defendant, but is "the assignee of antitrust claims arising from Perry's purchase of Caustic Soda through plaintiff Amrex Chemical Co, Inc., which purchased Caustic Soda directly from one or more Defendants during the [proposed] Class Period." (Dkt. 51 at ¶ 23).

Vandemark is phosgene chemical manufacturer. (Dkt. 625-7 at ¶ 103). During the proposed class period, it purchased caustic soda from OxyChem and Olin. (*Id.*). OxyChem sales amounted to \$2,120,149, and Olin sales amounted to \$51,079. (*Id.*).

DPPs collectively “account for 0.04 percent of the class period commerce of the entire [proposed] class.” (*Id.*).

**E. Dr. Lamb**

DPPs have engaged Dr. Lamb to provide expert testimony in this matter. Dr. Lamb is the president and founder of Monument Economics Group, a consulting firm that “provides economic research and quantitative and statistical analyses to clients[.]” (Dkt. 624-2 at ¶ 1). Dr. Lamb is a graduate of the University of Tennessee, Knoxville, and holds a master’s degree in economics from the University of Maryland and a Ph.D. in economics from the University of Pennsylvania. (*Id.* at ¶ 2).

Dr. Lamb has opined, among other things, that: (1) common evidence demonstrates that the structure of the caustic soda industry is conducive to the formation and operation of the alleged cartel; (2) common evidence and methods demonstrate that the alleged cartel artificially inflated the prices that all or nearly all members of the proposed class paid for caustic soda; and (3) there is a common, reliable standard economic methodology that may be used to calculate damages on a classwide basis, and by applying that methodology, he has “determined that aggregate class-wide damages suffered by Class members during the Class Period (from October 1, 2015, to December 31, 2018) are \$861 million.” (*See* Dkt. 624-2 at ¶¶ 17-22).

A key part of Dr. Lamb’s expert report is his performance of a multiple regression analysis to purportedly demonstrate that caustic soda prices were artificially inflated during the alleged class period. (*See id.* at ¶ 171). “Multiple regression analysis is a statistical tool used to understand the relationship between or among two or more variables. Multiple regression involves a variable to be explained—called the dependent variable—and additional explanatory variables that are thought to produce or be associated with changes in the dependent variable.” (Dkt. 625 at 6 (citation omitted)). Dr. Lamb’s overcharge regression model purports to show that “the prices paid by members of the proposed Class were 9.6 percent higher during the Class Period than during the competitive Benchmark Period (January 1, 2012 – September 30, 2015 and July 1, 2019 – December 31, 2019) after controlling for demand and supply factors, as well as other factors shown to contribute to variation in caustic soda prices.” (Dkt. 624-2 at ¶ 171). In constructing his overcharge regression model, Dr. Lamb claimed to control for global caustic soda demand by including monthly global alumina<sup>4</sup> production (excluding North America) as an independent variable. (*Id.* at ¶ 184). Dr. Lamb further used new privately-owned housing starts in the United States as a proxy for domestic chlorine demand.<sup>5</sup> (*Id.* at ¶ 186).

In his reply report, Dr. Lamb performed a price increase announcement regression analysis, purporting to measure the impact of Defendants’ price increase announcements

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<sup>4</sup> One use of caustic soda is to refine bauxite (a type of sedimentary rock) into alumina (a crystalline substance that is used as a starting material for the smelting of aluminum metal).

<sup>5</sup> Dr. Lamb used housing starts as a proxy because chlorine is used to make PVC and “PVC demand is largely driven by home construction.” (Dkt. 624-2 at ¶ 186).

made during the proposed class period. (Dkt. 624-3 at ¶ 124). This analysis “found that announced price increases effective during the Class Period raised prices on average by 2.6% above what would be expected based on supply and demand factors alone, while the price increase announcements effective in the Benchmark Period resulted in prices that were on average 1.7% lower than would be expected based on supply and demand factors alone.” (*Id.*).

**F. Dr. Johnson**

Defendants have engaged Dr. Johnson to provide expert testimony in this matter. Dr. Johnson is the Chief Executive Office of Edgeworth Economics, LLC, a “consulting firm that provides clients with objective expert economic and financial analysis for complex litigation and public policy debates.” (Dkt. 625-7 at ¶ 13). Dr. Johnson holds a B.A. in economics from the University of Rochester and a Ph.D. in economics from the Massachusetts Institute of Technology (“MIT”). (*Id.* at ¶ 14). Dr. Johnson’s areas of specialization at MIT were labor economics and econometrics (the application of statistics to economics). (*Id.*).

As relevant to the instant motions, Dr. Johnson has provided an expert report and a sur-reply expert report wherein—among other things—he responds to and critiques Dr. Lamb’s opinions. To briefly summarize, Dr. Johnson has argued that: (1) Dr. Lamb’s regression model is fundamentally flawed because Dr. Lamb failed to reliably identify the transactions to be included therein; (2) Dr. Lamb’s regression model fails to account for major world events that affected global supply of caustic soda and increased demand for U.S.-produced caustic soda, and thus suffers from omitted variable bias; (3) Dr. Lamb’s

regression model inappropriately uses new privately-owned housing units started in the United States as a proxy for domestic chlorine demand rather than more direct data; (4) Dr. Lamb's regression model is fundamentally unreliable because it relies upon a classwide average overcharge instead of a customer-specific average overcharge; and (5) Dr. Lamb's price increase announcement regression model is directly in conflict with his conclusion of a common overcharge. (*See* Dkt. 541-1; Dkt. 625-7).

As part of his critique of Dr. Lamb's regression model, Dr. Johnson ran his own multiple regression analysis wherein he added "multiple measures of export prices" (that is, spot export prices from various regions of the world) to Dr. Lamb's model. (Dkt. 625-7 at ¶ 44). Dr. Johnson ran eight additional regressions, in each of which he added one measure of export prices (contemporaneous and three-month lagged). (*Id.*). In seven of eight cases, he found no overcharge. In the eighth, the overcharge was statistically insignificant. (*Id.*). Dr. Johnson further performed multiple regression analyses wherein he used PVC prices (both contemporaneous and one-month lagged) as a proxy for U.S. chlorine demand, rather than housing starts. (*Id.* at ¶ 133). These regressions showed no overcharge. (*Id.*).

## **II. Procedural Background**

The instant actions were referred for the handling of non-dispositive pretrial matters to United States Magistrate Judge Michael J. Roemer (Dkt. 42), who entered a scheduling and case management order consolidating the cases for pretrial purposes (Dkt. 49). Judge Roemer further appointed Cera LLP and Kaplan Fox Kilsheiner LLP ("Kaplan Fox") as interim co-lead class counsel and Rupp Baase Pfalzgraf Cunningham LLC ("Rupp Baase")

as interim liaison counsel. (*Id.*). The operative pleading is the consolidated complaint filed on May 22, 2019. (Dkt. 51).

DPPs seek to certify a class with the following definition:

All persons and entities who purchased in the United States directly from one or more of the Defendants (or from any of Defendants' predecessors, subsidiaries, or affiliates) liquid forms of membrane or diaphragm grade Caustic Soda at any time between October 1, 2015 and December 31, 2018 (the "class"). Excluded from the class are Defendants, their predecessors, parents, subsidiaries, and affiliates, and all government entities, agencies, and instrumentalities. For purposes of this exclusion, "predecessors" includes The Dow Chemical Company, whose chlor-alkali business was acquired by Olin effective October 5, 2015, and Axiall Corporation, which was acquired by Westlake effective August 31, 2016. Also excluded are purchases under: (i) long-term fixed-price contracts that predate October 1, 2015, (ii) cost-based contracts (such as cost-plus contracts) with no component of price based on a Caustic Soda index, and (iii) contracts that are priced on an ECU (electrochemical unit) basis with no component of price based on a Caustic Soda index.

(Dkt. 474 at 1). DPPs further ask the Court to appoint them as class representatives and to appoint Cera LLP and Kaplan Fox as co-lead class counsel and Rupp Baase as liaison counsel. (Dkt. 474-1 at ¶¶ 101-105). Defendants oppose class certification. (Dkt. 632).

DPPs and Defendants have also filed motions to strike and/or exclude certain opinions offered by Drs. Johnson and Lamb, respectively. (Dkt. 570; Dkt. 573). These motions are opposed. (Dkt. 577; Dkt. 583). In addition to Defendants' joint motion, Shintech and Formosa USA have each filed individual motions to strike and/or exclude certain of Dr. Lamb's opinions. (Dkt. 567; Dkt. 572). DPPs also oppose these individual motions. (Dkt. 579; Dkt. 581).

The Court held a two-day evidentiary hearing on the instant motions in June of 2023. (Dkt. 650; Dkt. 651). Drs. Lamb and Johnson testified at the evidentiary hearing and were questioned at length by the Court and by counsel. (Dkt. 652; Dkt. 654). The parties further

submitted post-hearing briefing (Dkt. 667; Dkt. 669),<sup>6</sup> and the Court heard post-hearing oral argument on August 4, 2023, at which time it reserved decision (Dkt. 703).

## **DISCUSSION**

### **I. Motions to Exclude Expert Testimony**

#### **A. Legal Standard**

Pursuant to Federal Rule of Evidence 702, a proposed expert witness must possess “scientific, technical, or other specialized knowledge [that] will help the trier of fact to understand the evidence or to determine a fact in issue.” Fed. R. Evid. 702(a). In accordance with this rule, a court considering the admissibility of expert testimony must consider whether (1) “the testimony is based upon sufficient facts or data”; (2) “the testimony is the product of reliable principles and methods”; and (3) “the expert’s opinion reflects a reliable application of the principles and methods to the facts of the case.” Fed. R. Evid. 702(b), (c), (d).

In *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993), the Supreme Court explained that a trial court has a “gatekeeping” duty under Rule 702, and must ensure that proposed expert testimony “both rests on a reliable foundation and is

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<sup>6</sup> The undersigned’s individual preferences state that “[c]itations to legal authority should be included in the text of the memoranda of law—not footnotes.” United States District Court for the Western District of New York, *Hon. Elizabeth A. Wolford, Chief United States District Judge*, <https://www.nywd.uscourts.gov/content/hon-elizabeth-wolford-chief-united-states-district-judge> (last accessed Dec. 19, 2023). DPPs’ reply and post-hearing brief fail to comply with this instruction, and place citations to legal authority in footnotes. (See Dkt. 643; Dkt. 667). In all future filings in this case, the Court expects that the parties will include citations to legal authority within the text of any memoranda of law.

relevant to the task at hand.” *Id.* at 597; *see also Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 147 (1999) (“In *Daubert*, this Court held that Federal Rule of Evidence 702 imposes a special obligation upon a trial judge to ensure that any and all scientific testimony is not only relevant, but reliable.”) (quotation and alteration omitted).

“Per *Daubert* and its progeny, a court’s Rule 702 inquiry involves the assessment of three issues: (1) the qualifications of the expert, (2) the reliability of the methodology and underlying data employed by the expert, and (3) the relevance of that about which the expert intends to testify.” *Washington v. Kellwood Co.*, 105 F. Supp. 3d 293, 304 (S.D.N.Y. 2015). “Ultimately, the party proffering the expert has the burden to demonstrate by a preponderance of the evidence that its expert witness satisfies these criteria.” *Id.* (quotation and alteration omitted). “As the courts and Advisory Committee have made clear, ‘the rejection of expert testimony is the exception rather than the rule.’” *M.B. ex rel. Scott v. CSX Transp., Inc.*, 130 F. Supp. 3d 654, 665 (N.D.N.Y. 2015) (quoting Fed. R. Evid. 702, Advisory Committee’s Note).

“The Supreme Court has not definitively ruled on the extent to which a district court must undertake a *Daubert* analysis at the class certification stage,” but it has “offered limited dicta suggesting that a *Daubert* analysis may be required at least in some circumstances.” *In re U.S. Foodservice Inc. Pricing Litig.*, 729 F.3d 108, 129 (2d Cir. 2013). “[C]ourts in the Second Circuit regularly ‘subject expert testimony to *Daubert*’s rigorous standards insofar as that testimony is relevant to the Rule 23 class certification analysis.’” *Bowling v. Johnson & Johnson*, No. 17 Civ. 3982 (AJN), 2019 WL 1760162,



at \*7 (S.D.N.Y. Apr. 22, 2019) (quoting *Scott v. Chipotle Mexican Grill, Inc.*, 315 F.R.D. 33, 55 (S.D.N.Y. 2016)).

Here, the Court’s resolution of DPPs’ class certification motion, as set forth below, relies in part on Dr. Johnson’s opinions. Accordingly, the Court has resolved DPPs’ challenges to the admissibility of those opinions below. However, even assuming *arguendo* that all of Dr. Lamb’s opinions are admissible under Rule 702 and *Daubert*, the Court still does not find class certification warranted. Accordingly, the Court need not, at this juncture, resolve the various challenges to Dr. Lamb’s opinions. *See, e.g., In re 5-Hour Energy Mktg. & Sales Pracs. Litig.*, No. ML132438PSGPLAX, 2017 WL 2559615, at \*5 (C.D. Cal. June 7, 2017) (“Because the issue of whether [the plaintiffs’ expert] has put forward a workable model to assess damages on a class-wide basis is closely intertwined with the Rule 23(b) predominance analysis, the Court declines to address the reliability of [the expert’s] methodologies in a *Daubert* motion, and instead accepts [the expert’s] expert report and testimony for the limited purpose of deciding the predominance issue.”). Instead, the Court denies the motions seeking to strike Dr. Lamb’s opinions and testimony as moot.

#### **B. Admissibility of Dr. Johnson’s Opinions**

DPPs ask the Court to find that Dr. Johnson’s multiple regression analyses are inadmissible because they “suffer from endogeneity or simultaneity bias. . . . This statistical result means Dr. Johnson’s regressions are biased and inconsistent and, therefore, not reliable.” (Dkt. 625 at 5). As explained above, a multiple regression analysis seeks to

understand the relationship between two or more variables. An explanatory variable is endogenous if it is jointly determined with the dependent variable.

DPPs argue that spot export prices and domestic caustic soda prices are driven by many of the same factors and that Dr. Johnson's multiple regression analyses have accordingly introduced endogeneity by including Northwest Europe, Northeast Asia, or U.S. Gulf Coast spot export prices. (*See* Dkt. 625 at 12-13). DPPs further argue that the use of PVC prices as a proxy for U.S. chlorine demand introduces endogeneity because PVC prices measure the equilibrium between PVC supply and demand. (*Id.* at 13-14).

The Court explored this issue at the evidentiary hearing. With respect to spot export prices, Dr. Johnson testified that there was no endogeneity problem, because foreign markets are driven by global forces different from those that drive the U.S. market. (Dkt. 652 at 37-38). Dr. Johnson also explained that he had used both contemporaneous and lagged prices in the challenged multiple regression analyses precisely to confirm that there was no endogeneity problem. According to Dr. Johnson, because endogeneity is fundamentally an issue of causation—that is, it occurs where the dependent variable and the explanatory variable arise from the same underlying factors—an economist can control for endogeneity by using a time-lagged explanatory variable. (*Id.*).

Dr. Lamb disagreed with Dr. Johnson, testifying that the data shows that global export prices are endogenous, because the results of Dr. Johnson's multiple regression analyses do not make economic sense. More specifically, Dr. Lamb explained (as he had

in his reply report) that the coefficients on the explanatory variables<sup>7</sup> set forth in Dr. Johnson's multiple regression analyses "become not statistically significant, or they reverse the signs so that they have a perverse interpretation." (Dkt. 652 at 43). According to Dr. Lamb, this is evidence of endogeneity, because if an endogenous variable is introduced into a multiple regression analyses, it "is going to take up the role of explaining all of the variation, and the other market factors are going to become not statistically significant or have perverse signs." (*Id.* at 46-47).

Dr. Johnson testified that he "would be concerned . . . if the signs didn't change, that might tell me that I have an endogeneity problem," and that the reasons the coefficients changed was because "the regression model that omitted the additional explanatory variables likely is misspecified, and its results are biased and unreliable." (*Id.* at 60-65). Dr. Lamb again disagreed, testifying that the prices all moved together "because they are all tracking the same forces." (*Id.* at 70).

As this discussion shows, DPPs "ask[] the Court to take sides in a dispute between experts about the intricacies of econometric modeling." *In re Vitamin C Antitrust Litig.*, No. 05-CV-0453, 2012 WL 6675117, at \*8 (E.D.N.Y. Dec. 21, 2012). However, "[t]hat is not the proper function of a *Daubert motion*. This is not a case in which an expert is unable to articulate a rationale for his methodology; nor is it a case where the proffered rationale is patently flawed or unreasonable." *Id.* To the contrary, the Court was able to follow Dr.

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<sup>7</sup> In a multiple regression analysis, "the magnitude of the impact of a given economic factor on the dependent variable is typically summarized by a parameter or coefficient that can be estimated from the available data." (Dkt. 625 at 6 (citation omitted)).

Johnson’s explanation, and found it reasonable and persuasive, for reasons discussed more fully below. Accordingly, there is no basis for the Court to strike or exclude Dr. Johnson’s opinions under Rule 702, and DPPs’ motion seeking that relief is denied. *See In re Nat’l Prescription Opiate Litig.*, No. 1:17-MD-2804, 2019 WL 3934597, at \*10 (N.D. Ohio Aug. 20, 2019) (“the significance of endogeneity relates to the weight, not the admissibility, of [an expert’s] report and testimony”); *In re Air Cargo Shipping Servs. Antitrust Litig.*, No. 06-MD-1175 JG VVP, 2014 WL 7882100, at \*21 (E.D.N.Y. Oct. 15, 2014) (finding “no basis for believing” that “disagreement between experts” regarding whether inclusion of particular variable may lead to endogeneity “goes to anything other than the weight of the evidence”), *adopted*, 2015 WL 5093503 (E.D.N.Y. July 10, 2015).

## **II. Motion for Class Certification**

### **A. Legal Standard**

“In determining whether class certification is appropriate, a district court must first ascertain whether the claims meet the preconditions of [Federal] Rule [of Civil Procedure] 23(a). . . .” *Teamsters Loc. 445 Freight Div. Pension Fund v. Bombardier Inc.*, 546 F.3d 196, 201-02 (2d Cir. 2008). Specifically, the Court must determine whether the proposed class meets the following requirements:

- (1) the class is so numerous that joinder of all members is impracticable;
- (2) there are questions of law or fact common to the class;
- (3) the claims or defenses of the representative parties are typical of the claims or defenses of the class; and
- (4) the representative parties will fairly and adequately protect the interests of the class.

Fed. R. Civ. P. 23(a). If all these requirements are met, the Court may grant class certification where one of the scenarios set forth under Rule 23(b)(1)-(3) is satisfied. In this matter, DPPs seek certification under Rule 23(b)(3) (*see* Dkt. 622 at 7-8), which provides that class certification is appropriate if: (i) common questions of law or fact predominate over questions affecting only individual class members; and (ii) class treatment is superior to other methods for adjudicating the controversy.

The Second Circuit has also “recognized an implied requirement of ascertainability in Rule 23, which demands that a class be sufficiently definite so that it is administratively feasible for the court to determine whether a particular individual is a member.” *In re Petrobras Sec.*, 862 F.3d 250, 260 (2d Cir. 2017) (quotations omitted). “A class is ascertainable when defined by objective criteria that are administratively feasible and when identifying its members would not require a mini-hearing on the merits of each case.” *Brecher v. Republic of Argentina*, 806 F.3d 22, 24-25 (2d Cir. 2015) (citation omitted).

Rule 23 “does not set forth a mere pleading standard. Rather, a party must not only be prepared to prove that there are in fact sufficiently numerous parties, common questions of law or fact, typicality of claims or defenses, and adequacy of representation, as required by Rule 23(a). The party must also satisfy through evidentiary proof at least one of the provisions of Rule 23(b).” *Comcast Corp. v. Behrend*, 569 U.S. 27, 33 (2013) (quotations and citations omitted). “[T]he preponderance of the evidence standard applies to evidence proffered to establish Rule 23’s requirements.” *Teamsters Loc. 445*, 546 F.3d at 202.

**B. DPPs Cannot Satisfy the Predominance, Typicality, or Ascertainability Requirements**

Defendants oppose DPPs’ class certification motion on numerous grounds, including: (1) DPPs do not adequately represent the proposed class; (2) DPPs’ claims are not typical of the proposed class; (3) individual issues will predominate because DPPs have no common means of proving classwide antitrust impact; (4) individual issues will predominate on damages; (5) individual issues will predominate on Defendants’ defenses; (6) DPPs cannot show that a class action is superior to individual actions; and (7) DPPs’ proposed class is not objectively ascertainable. (*See* Dkt. 632). Having carefully considered the voluminous record, the Court agrees with Defendants that neither the typicality nor the predominance requirements have been satisfied. The Court further agrees that the proposed class is not ascertainable. Because these conclusions require the denial of DPPs’ class certification motion, the Court need not and does not reach Defendants’ other arguments.

**1. Predominance**

Predominance “tests whether proposed classes are sufficiently cohesive to warrant adjudication by representation.” *Amchem Prods., Inc. v. Windsor*, 521 U.S. 591, 623 (1997). “Determining whether common questions of law or fact predominate requires specifically evaluating the elements of the underlying cause of action.” *In re Namenda Indirect Purchaser Antitrust Litig.*, 338 F.R.D. 527, 550 (S.D.N.Y. 2021) (quotation omitted). The general elements of an antitrust claim are “(1) a violation of the antitrust laws; (2) injury caused by that violation; and (3) measurable damages.” *Id.*

In *Comcast*, the Supreme Court explained that:

[A]t the class-certification stage (as at trial), any model supporting a plaintiff's damages case must be consistent with its liability case, particularly with respect to the alleged anticompetitive effect of the violation. And for purposes of Rule 23, courts must conduct a rigorous analysis to determine whether that is so.

569 U.S. at 35 (quotations and citations omitted); *see also Passman v. Peloton Interactive, Inc.*, \_\_ F. Supp. 3d \_\_, No. 19-CV-11711 (LJL), 2023 WL 3195941, at \*5 (S.D.N.Y. May 2, 2023) (“The Supreme Court in *Comcast Corp. v. Behrend* held that Rule 23(b)(3) requires that the proposed methodology for calculating damages be consistent with the class's theory of liability and capable of measuring these damages on a classwide basis.”).

As another district court in this Circuit has explained, post-*Comcast*:

[W]here an expert's model is the basis for a plaintiff's claim of classwide impact and causation, a court is obliged to rigorously examine the soundness of that model at the class certification stage. A court may certify a class under these circumstances only where the Court finds the model methodologically sound. That is so notwithstanding that, if the class is certified, the finder of fact, too, would be called upon at trial to evaluate the soundness and persuasiveness of the expert's model.

*In re Aluminum Warehousing*, 336 F.R.D. 5, 46-47 (S.D.N.Y. 2020). Courts applying the standards articulated in *Comcast* have “uniformly recognized that where an expert's model of classwide injury fails, absent alternative common proof of class impact, such deficiencies will preclude class certification under Rule 23(b)(3).” *Id.* at 49. In other words, “[w]ithout common proof of injury and causation, antitrust plaintiffs cannot establish predominance.” *Id.* at 45 (citation and original alteration omitted).

DPPs proffer as common proof of classwide injury: “the characteristics of the U.S. market for caustic soda; the pricing mechanisms across the industry, including the use of price increase announcements; a market-wide pricing structure; and Dr. Lamb’s overcharge regression.” (Dkt. 667 at 14). The Court agrees with Defendants that Dr. Lamb’s regression model is not methodologically sound, for multiple reasons. The Court further concludes that DPPs’ other proffered common proof is insufficient to demonstrate antitrust injury on a classwide basis, for the reasons that follow.

**a. Failure to Accurately Classify Transactions**

A fundamental error in Dr. Lamb’s expert opinions relates to the class definition. As set forth above, the class that DPPs ask the Court to certify excludes “purchases under: (i) long-term fixed-price contracts that predate October 1, 2015, (ii) cost-based contracts (such as cost-plus contracts) with no component of price based on a Caustic Soda index, and (iii) contracts that are priced on an ECU (electrochemical unit) basis with no component of price based on a Caustic Soda index.” (Dkt. 622 at 8 n.4). This highly specific class definition is necessary because DPPs’ theory of liability hinges on “the trier of fact . . . draw[ing] an inference that each purchaser was impacted by price increase announcements[.]” (Dkt. 667 at 15). In other words, the class cannot include purchases made under contracts with pricing formulas that were not even possibly impacted by price increase announcements.

Because the class definition is necessarily crafted in this highly specific fashion, a reliable methodology for determining whether a particular purchase should be excluded is a prerequisite to assessing whether there has been classwide injury. Such a methodology



must be capable of accurately determining whether a particular transaction was made pursuant to a contract and, if so, the terms of that contract. Absent that information, there is no reliable way to determine whether a purchase is included within the class definition, and thus no reliable way to determine the impact of Defendants' alleged anticompetitive conduct on the class as a whole.

In his expert report, Dr. Lamb explained that as part of the discovery in this action, Defendants provided "transaction data" containing "over 3.3 million observations containing information with regard to quantity, form of caustic soda sold, price, and customer." (Dkt. 624-2 at ¶ 190). "In order to use Defendants' transaction data in [his] analysis," Dr. Lamb and "staff working under [his] direction" had to "first process and clean some of the fields included in the datasets produced." (*Id.* at ¶ 192). Part of this processing and cleaning consisted of "identification and assignment of contract type to customers where data are available." (*Id.*).

Specifically, Dr. Lamb and his staff assigned each transaction one of the following contract types: "FORMULA"; "NEGOTIATED"; "OTHER"; and "MARKET BASKET." (*Id.* at ¶ 192 n. 554). Contracts designated "OTHER" included "long-term contracts under fixed prices, cost-based contracts, [and] ECU price contracts that do not have an index component to pricing." (*Id.*) Transactions that could not be assigned a contract type were designated as "N/A." "Contract types were able to be applied to approximately 65% of observations." (*Id.*).

Dr. Lamb and his staff did not review individual contracts in order to make these designations—instead, Dr. Lamb's reply report indicated that they relied on the following:

(1) for Olin, “Olin customer-contract databases that contain contract and pricing detail”; (2) for OxyChem, “internal documents and databases that identified ECU customers and pricing terms for contracts”; (3) for Westlake, “internal documents and databases . . . that identified ECU customers and pricing terms for contracts”; (4) for Shintech, “internal databases that listed customers and pricing terms of contracts, as well as Shintech’s interrogatory responses that identified contracted customers”; and (5) for Formosa USA, “internal documents that identify customers that purchase under contract and those that make spot purchases.” (Dkt. 624-3 at ¶ 73).

In his expert report, Dr. Johnson identified two examples of contracts that had been included in Dr. Lamb’s overcharge regression model despite meeting the definition for “OTHER” contracts. (Dkt. 625-7 at ¶ 107). Dr. Johnson further observed that more than one-third of all the transactions at issue had been designated “N/A,” including: 33% of Olin’s transactions; 50% of OxyChem’s transactions; 30% of Westlake’s transactions; 73% of Formosa USA’s transactions; 16% of Shintech’s transactions; and 25% of KA Steel’s transactions. (Dkt. 625-7 at ¶ 108). According to Dr. Johnson, “Dr. Lamb simply assumed all these N/A contracts met the class definition and included them in his model,” but without looking at individual contracts, “there is no way to know whether these contracts should have been properly excluded from the class or should have been classified in one of the other contract buckets.” (*Id.*).

In his reply report, Dr. Lamb did not dispute that the two contracts identified by Dr. Johnson were improperly included, but argued that they represent only “1.2% of the Class sales during the Class Period I reported in Table 1.” (Dkt. 624-3 at ¶ 74). Dr. Lamb’s reply

report further stated without citation that the excluded types of contracts are “rare” and that “to the extent that there are more contracts that I failed to properly classify and exclude from my analysis, it would likely have a *de minimis* effect on the results I reported in the Lamb [Expert] Report.” (*Id.*). Additionally, Dr. Lamb argued in his reply report that the sales in the “N/A” category represented sales made without contracts, and that Dr. Johnson “fails to note that almost 75% of net sales during the class period were assigned a contract type.” (Dkt. 624-3 at ¶ 75 and n.224).

This issue was explored in depth at the evidentiary hearing. The Court asked Dr. Lamb what data he was relying on in asserting that the excluded contract types were rare, and Dr. Lamb replied that it was based on his analysis, which was “all contained in paragraph 73” of his reply report. (Dkt. 652 at 117-18). Dr. Johnson then explained in detail why he believed that Dr. Lamb’s review of the transaction data was “completely inadequate” to allow him to conclude that the excluded contract types were rare. (*Id.* at 119). Dr. Johnson walked through examples of contracts, illustrating their complexity. For example, one contract that Dr. Johnson discussed provided for different prices over different times periods, sometimes relying on indices, sometimes relying on different types of ECUs, and sometimes relying on other measures. (*Id.*). Dr. Johnson explained that this level of detail was not captured in the databases and other documents on which Dr. Lamb and his staff relied in assigning contract values. (*Id.* at 120-21).

On re-direct examination, Dr. Lamb explained that his analysis started with “what are essentially databases, limited databases that list customers and contract types,” and that it was not necessary to look at every contract, but it was “necessary to look at certain

contracts.” (Dkt. 654 at 106-07). Dr. Lamb gave an example of “one class member that Defendants identified that they said should be excluded based on being an ECU based contract,” and stated that while it was not “clear whether it was true for the caustic soda part of that contract or the chlorine part,” he had excluded that purchaser “in an abundance of caution after looking at the contract.” (*Id.* at 107).

On cross-examination of Dr. Lamb, defense counsel identified 17 OxyChem customers whose transactions Dr. Lamb had labeled “N/A” despite the fact that they had contracts in place during the relevant time period. (*Id.* at 19-21). Dr. Lamb conceded that he would have to look at these customers’ contracts to know the terms under which they had purchased caustic soda from OxyChem. (*Id.*).

The Court agrees with Defendants that the methodology employed by Dr. Lamb cannot accurately determine whether a particular transaction falls within an exclusion to the class definition. The Court found Dr. Lamb’s explanation regarding the manner in which he and his staff assigned contract values unpersuasive with respect to its reliability. Dr. Lamb failed, upon direct questioning by the Court, to provide any cogent explanation for how he had determined that the large percentage of “N/A” sales was consistent with Defendants’ sales patterns. Dr. Lamb’s assumption that “N/A” transactions generally represent sales made without contracts is unsupported by the evidence of record and by his own expert report.

Formosa USA’s sales neatly illustrate this point. Dr. Lamb designated 73% of Formosa USA’s transactions as “N/A.” (Dkt. 625-7 at ¶ 108). In other words, Dr. Lamb’s regression model assumes that nearly three-quarters of Formosa USA’s transactions were

not made pursuant to contract. The only evidence of record that Dr. Lamb pointed to in his reply report to purportedly support this conclusion is that a Formosa USA representative testified that [REDACTED]

[REDACTED].<sup>8</sup> This statement provides no meaningful information about the percentage of Formosa USA's sales made without a contract. [REDACTED]

[REDACTED]

Furthermore, the evidence presented at the evidentiary hearing showed that there were transactions designated "N/A" that in fact were made pursuant to a contract. DPPs' argument that a subsequent review of the contracts for the 17 OxyChem customers identified at the evidentiary hearing "revealed no contract that should have been excluded by DPPs' class definition" (Dkt. 667 at 37) misses the point. Regardless of whether those particular contracts ultimately should have been excluded, their existence: (1) directly contradicts Dr. Lamb's assumption that the transactions within the "N/A" category represent sales made without a written contract; and (2) illustrates the shortcomings in the methodology used by Dr. Lamb in ascertaining what category to assign to particular

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<sup>8</sup> Certain information has been redacted from the publicly filed version of this Decision and Order because it is currently under seal. Within 21 days of entry of this Decision and Order, the Court intends to file an unredacted version of its Decision and Order, unless any party comes forward with an updated, specific showing of why the information at issue should continue to be maintained under seal. The Court will enter a separate text order reflecting this deadline.

transactions. Further, the fact that DPPs had to review these contracts individually to ascertain whether or not they should have been excluded is fully consistent with the arguments made by Dr. Johnson and Defendants.

The Court is further unpersuaded by DPPs' argument that "[d]espite the best efforts of defendants—with full access to both the record evidence and their own knowledgeable employees—there has been no evidence presented that the excluded contract types were not adequately tracked in business records and identifiable from centralized sources that are common to the Class." (Dkt. 667 at 37). DPPs' argument reverses the applicable burden of proof. As the parties seeking class certification, DPPs bear responsibility for showing the soundness of Dr. Lamb's methodology—*i.e.*, that the excluded contract types *were* adequately tracked in business records and identifiable from centralized sources that are common to the class. They have failed to meet their burden. As Defendants point out in their post-hearing brief, these "databases" are largely "Excel worksheets that Dr. Lamb's team pulled from the Defendants' various document productions," and "say nothing about how contracts changed over the alleged class period, including whether new contracts were negotiated or whether existing contracts continued under evergreen provisions, were allowed to expire, or were renegotiated." (Dkt. 669 at 11-12).

In addition, and contrary to DPPs' argument, Dr. Johnson testified that the databases relied upon by Dr. Lamb did not capture the information necessary to determine whether a particular purchase had been made pursuant to one of the excluded contract types, and supported that opinion by showing examples of complex contracts that were not accurately recorded in those databases. Further, the record before the Court contains specific

examples of cases in which the terms of contracts changed from what was recorded in the databases relied upon by Dr. Lamb and his staff. (*Id.* at 12).

Additionally, Dr. Johnson's identification of two contracts that were initially improperly included by Dr. Lamb despite meeting the definition for exclusion is evidence that the sources relied upon by Dr. Lamb were inadequate to allow for accurate assignment of contract values. DPPs make much of the fact that Dr. Johnson identified only two examples, but they again ignore the fact that they bear the burden of proof at the class certification stage. The crux of Dr. Johnson's argument is that one would have to review each and every contract individually to ascertain whether or not purchases made pursuant thereto should be excluded and that this is an unmanageable task on a classwide basis. It is not an answer to that argument to say that Dr. Johnson did not individually review every contract to identify each one that was wrongly included in Dr. Lamb's overcharge regression model. It is DPPs' burden to explain why the admitted failure to properly characterize the examples identified by Dr. Johnson does not call into question the reliability of the classification process. They have failed to do so. Instead, Dr. Lamb has simply speculated that "to the extent that there are more contracts that I failed to properly classify and exclude from my analysis, it would likely have a *de minimis* effect on the results I reported in the Lamb Report." (Dkt. 623-4 at ¶ 60).

The Court further found persuasive Dr. Johnson's testimony regarding the complexities of the contracts at issue. Dr. Johnson explained that when one actually looks at exemplars of the individual contracts, they do not necessarily contain straightforward formulas or references to indices. Dr. Johnson walked through an example of a contract

that had [REDACTED]

[REDACTED]

[REDACTED].

(Dkt. 654 at 231-34). Dr. Lamb’s own testimony underscored the nuances at issue when he identified an example of a contract where it was not even clear if the ECU-based pricing was for “the caustic soda part of that contract or the chlorine part.” (*Id.* at 107).

The complexity of the contractual pricing mechanisms used in the caustic soda industry makes it infeasible to accurately categorize the transactional data without reviewing the individual contracts. This is also problematic because, as was discussed at oral argument, the coefficients are different for each category of contracts included in Dr. Lamb’s analysis. (*See* Dkt. 709 at 13). DPPs’ counsel conceded that mischaracterization of contract types (as distinct from improper inclusion or inclusion of particular purchases within the proposed class definition) could have some effect on Dr. Lamb’s calculations. (*Id.* at 16-17). While DPPs’ counsel tried to argue that any such effect would be *de minimis*, that argument appeared to be based simply on speculation that “there are just not enough transactions that were misclassified as N/A” to have a significant effect. (*Id.* at 17). Again, there is no reliable way of knowing how many transactions were misclassified without performing a contract-by-contract analysis, because the databases and documents relied upon by Dr. Lamb and his team simply lack sufficient information to capture the complexity of the contractual terms at issue.

“If individualized questions as to membership in the proposed class predominate over common questions, class certification is precluded.” *Calvo v. City of New York*, No.



14-CV-7246 (VEC), 2018 WL 1633565, at \*7 (S.D.N.Y. Apr. 2, 2018); *see also* *Vogel v. City of New York*, No. 14 CIV. 9171 (RMB), 2017 WL 4712791, at \*5 (S.D.N.Y. Sept. 19, 2017) (“If, as here, too much individual inquiry is required to determine whether someone is a member of the class, then a court could find that class issues do not predominate over individual issues.” (quotations omitted)). Because membership in the proposed class could not reliably be determined without reviewing the individual contracts pursuant to which purchases were made, individual questions would predominate over common questions in this case.

**b. Failure to Account for Global Demand for U.S. Produced-Caustic Soda**

Another fundamental error in Dr. Lamb’s overcharge regression model is the failure to appropriately account for global demand for U.S.-produced caustic soda. Again, this is an issue discussed in-depth in the expert reports and explored at the evidentiary hearing.

The dependent variable in Dr. Lamb’s regression model is “the caustic soda price charged by the Defendants and paid by the [proposed] Class members.” (Dkt. 624-2 at ¶ 181). The independent variables include “demand variables,” “co-product demand variables,” “supply variables,” and “categorical variables.” (*Id.* at ¶ 182). As to demand variables, Dr. Lamb explained that “[t]o measure the effect of demand for caustic soda on caustic soda prices, I needed to measure U.S. and export demand for caustic soda.” (*Id.* at ¶ 183). To measure export demand—that is, global demand—for U.S.-produced caustic soda, Dr. Lamb “used data on monthly global alumina production, excluding North America, from the International Aluminum Institute.” (*Id.* at ¶ 184).

Dr. Johnson’s expert report heavily criticized Dr. Lamb’s use of global alumina production as a proxy for global demand for U.S.-produced caustic soda. Dr. Johnson contended that global alumina production fails to account for events that did not affect the overall global demand for caustic soda, “but resulted in shifts in the demand in favor of U.S.-produced caustic soda because they led to a decrease in the global supply for caustic soda.” (Dkt. 625-7 at ¶ 41). Dr. Johnson identified “several major industry events” occurring during the proposed class period that he argued affected demand for U.S.-produced caustic soda, including a phasing out of mercury-cell caustic soda production in Europe, the enactment of stricter environmental regulations in China, and government embargoes placed on an alumina refinery in Brazil. (*Id.* at ¶ 35). Dr. Johnson concluded that “Dr. Lamb’s sole export demand control variable fails to appropriately measure the change in foreign demand for U.S.-produced caustic soda on domestic caustic soda.” (*Id.* at ¶ 41).

As described above, Dr. Johnson also ran his own multiple regression analyses wherein he added spot export prices from various regions of the world to Dr. Lamb’s model. (*Id.* ¶ 44). These regressions showed no overcharge. (*Id.*). As the Court explained in its discussion of DPPs’ *Daubert* motion, Dr. Lamb contends that the use of spot export prices inappropriately introduced endogeneity into the regression model. (*See* Dkt. 624-3 at ¶ 24).

At the evidentiary hearing, Dr. Lamb testified that “[g]lobal alumina production measures . . . global demand for U.S. exports of caustic soda. About 74 percent of U.S. exports according to the Defendants’ data.” (Dkt. 652 at ¶ 25). However, upon cross-

examination by defense counsel, Dr. Lamb clarified that the 74% statistic applied only to cases “where the end use [of the exported caustic soda] could be identified.” (Dkt. 654 at 73). Dr. Lamb was unable to state the percentage of exported caustic soda for which he had been able to identify an end use. (*Id.*). He could not rule out the possibility that it was as much as 75 percent. (*Id.*). Dr. Johnson testified that his recollection was that end uses could not be identified for “something like 35 percent” of U.S. exports. (*Id.* at 223). He further testified that he was not able to accurately calculate what percent of U.S. caustic soda exports was used to produce alumina because there was a “huge set” for which there was “no characterization.” (*Id.* at 221). In their post-hearing brief, Defendants state that “[b]ased on the data in [Dr. Lamb’s] turnover, only 48.1% of Defendants’ exported caustic soda went to alumina production, 34.5% went to unknown end-uses, and 17.3% went to non-alumina customers.” (Dkt. 669 at 23).

DPPs have not shown that it is methodologically sound to use global alumina production as the sole proxy for global demand for U.S.-produced caustic soda. Dr. Lamb’s contention that global alumina production measures global demand for U.S. exports of caustic soda is based on his conclusion that 74 percent of U.S. exports of caustic soda is used to produce alumina. However, that conclusion is not reliable. It is undisputed that there was a substantial subset of U.S. caustic soda exports for which no end use could be identified. While neither expert could state with precision what percent of U.S. caustic soda exports had an unidentified end use, Dr. Lamb could not—at least at the evidentiary hearing—rule out the possibility that it was as much as 75 percent. If that were the case, then the 74 percent statistic relied on by Dr. Lamb would actually represent only 18.5

percent of total U.S. caustic soda exports.<sup>9</sup> Accepting the 35 percent estimate offered by Dr. Johnson and reiterated by Defendants in their post-hearing brief would mean that alumina production potentially accounted for less than half (approximately 48 percent) of demand for U.S. caustic soda exports.

This is a significant and fundamental error in Dr. Lamb's regression model. As both Dr. Lamb and Dr. Johnson testified at the evidentiary hearing, global demand for U.S.-produced caustic soda plays a significant role in determining the price that Defendants can charge their customers. The failure to include a reliable proxy for global demand for U.S.-produced caustic soda in the regression model is accordingly a fatal flaw. DPPs have not demonstrated that the use of a proxy that accounts for less than half of global demand for U.S. produced caustic soda is methodologically sound.

The Court further agrees with Defendants that Dr. Johnson's additional multiple regression analyses, wherein he included spot export prices as an independent variable, demonstrate the unsoundness of Dr. Lamb's model. The Court was not persuaded by Dr. Lamb's argument that Dr. Johnson had improperly introduced endogeneity into the model by including spot export prices. Dr. Johnson reasonably explained that export prices are determined by supply and demand factors in their respective markets, not by supply and demand factors within the United States. (Dkt. 652 at 37-38). The arguments that Dr. Lamb offered in opposition to this explanation—including in his reply report—were not persuasive. For example, in his reply report, Dr. Lamb stated that “the cost to produce

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<sup>9</sup> Interestingly, it is undisputed that alumina production represents 17 percent of overall global demand for caustic soda. (See Dkt. 654 at 49-50).

caustic soda” is a factor that impacts both spot export prices and domestic prices. (Dkt. 624-3 at 30). However, Dr. Lamb offers no corroboration for the proposition that the cost to produce caustic soda is uniform globally.

Further, and as Defendants correctly point out in their post-hearing brief (*see* Dkt. 669 at 28), Dr. Lamb’s arguments are internally inconsistent. In his reply report, he argued that Europe “is not a significant participant in the export market” and has an insignificant effect on caustic soda prices within the United States. (Dkt. 624-3 at ¶¶ 13-15). If this is the case, it is difficult to see how European export prices could be determined by the same factors as domestic caustic soda prices, and Dr. Lamb has offered no explanation for this discrepancy.

Dr. Lamb’s argument regarding the purportedly nonsensical nature of the results when spot export prices were added to the analysis was also unpersuasive. As Dr. Johnson explained, his additional multiple regression analyses were not intended to be an accurate model, which is what Dr. Lamb’s argument assumes. (*See* Dkt. 652 at 45 (“Those kinds of results that we saw in Dr. Johnson’s table and that Plaintiffs have highlighted in their table are nonsensical, and they indicate a fatal error in his analysis that renders it unreliable and, frankly, something that I as an econometrician, in my experience, wouldn’t use to try and understand in this market at all.”)). Instead, Dr. Johnson’s additional multiple regressions analyses are intended to *test* whether Dr. Lamb’s model adequately accounts for all factors. (*Id.* at 61).

Dr. Lamb’s regression model purports to contain independent variables that control for factors that affect domestic caustic soda prices. (*See* Dkt. 624-2 at ¶ 182). If that is

true, then the addition of another independent variable controlling for one of those same factors should not cause the coefficients to change. (See Dkt. 652 at 60; *see also* Dkt. 669 at 26 (“If the model properly captures all non-conspiratorial factors, then adding additional explanatory variables will have no effect on the model’s overcharge estimate (since whatever new explanatory variable is added will have already been accounted for by the model’s original controls.”)). On the other hand, “[i]f the[] additional explanatory variables turn out to be statistically significant, and the coefficient estimates on the previously included explanatory variables change substantially when the additional variables are added, then the regression model that omitted the additional explanatory variables likely is misspecified and its results are biased and unreliable.” (Dkt. 625-7 at 35 n.107 (citation omitted)).

In other words, Dr. Johnson does not contend that the addition of spot export prices as an additional explanatory variable *fixed* every flaw in Dr. Lamb’s regression model, such that the results of his additional multiple regression analyses should be expected to make perfect economic sense. Instead, the addition of spot export prices as an additional explanatory variable resulted in significant changes to the coefficient estimates on the previously included explanatory variables, thus indicating that the model is misspecified. This misspecification is another basis for concluding that Dr. Lamb’s methodology is insufficiently sound to satisfy the requirements of Rule 23. *See Bickerstaff v. Vassar Coll.*, 196 F.3d 435, 450 (2d Cir. 1999) (affirming district court’s decision to “accord[] the regression analysis no probative weight” where it “failed to account for the major factors” relevant to analysis).

Defendants have identified a number of other purported flaws in Dr. Lamb's regression model, including the use of housing starts as a proxy for chlorine demand, the used of a pooled overcharge model, and the alleged inability of the model to isolate the impact of an individual theory of antitrust harm. The Court need not and does not reach these additional arguments, because it concludes that the methodological flaws identified above render Dr. Lamb's regression model unsound and insufficient to serve as common proof of antitrust injury.

**c. Other Purported Common Proof of Class Impact**

The Court next considers whether DPPs have presented "alternative common proof of class impact" sufficient to satisfy Rule 23(b)(3)'s predominance requirement. *In re Aluminum Warehousing Antitrust Litig.*, 336 F.R.D. at 49. In addition to Dr. Lamb's overcharge regression model, DPPs identify the following "common proof": "the characteristics of the U.S. market for the caustic soda; the pricing mechanisms across the industry, including the use of price increase announcements; [and] a market-wide pricing structure[.]" (Dkt. 667 at 14).

The Court agrees with Defendants that this alleged common proof is not sufficient to prove classwide impact without Dr. Lamb's overcharge regression model. Before considering the specifics of DPPs' arguments, it is important to recall DPPs' theory of how the alleged classwide injury occurred. According to DPPs, Defendants conspired to issue coordinated price increase announcements, which led to artificially increased "spot prices or prices under freely negotiated contracts." (Dkt. 667 at 15). Those artificially increased

negotiated prices were then allegedly incorporated into the broad variety of pricing indices referenced in the proposed class members' contracts. (*Id.*).

Thus, while DPPs frequently refer to this case as involving a straightforward horizontal price-fixing conspiracy, it is more complex than the paradigmatic case in which competitors secretly agree upon a price and then simply charge that agreed-upon price to their customers. *Cf. Aluminum Warehousing*, 336 F.R.D. at 45-46 (contrasting “paradigmatic or ‘traditional’ price fixing conspiracy” with alleged conspiracy in which there was “a more elongated causal chain”). With respect to the large number of proposed class-members whose pricing structures were based on indices, antitrust injury can be shown only by proof that artificially increased negotiated prices caused by the Defendants' alleged conspiracy were in fact incorporated into the specific indices referenced in those contracts.

With this background in mind, the Court finds that the pricing mechanisms within the domestic caustic soda industry are not common proof of classwide antitrust injury. Dr. Lamb's price increase announcement regression—which was introduced in his reply report—purports to show “how transaction level prices changed following each price increase announcement after controlling for supply and demand factors, as well as customer, Defendant, product, contract type, shipping mode, and shipping origin and destination.” (Dkt. 624-3 at ¶ 124). Dr. Lamb's price increase announcement regression, like his overcharge regression, relies on the accurate assignment of contract values to the transaction data. Accordingly, the Court's earlier discussion regarding the unreliability of



Dr. Lamb's contract characterization process applies with full force with respect to the price increase announcement regression, which is also methodologically unsound.

Further, the price increase announcement regression is fundamentally inconsistent with the overcharge regression, which the Court finds demonstrates the unreliability of both models. The price increase announcement regression purports to show that caustic soda prices were, on average, 1.7 percent below what supply and demand factors predicted after price increase announcements during the benchmark period (despite the fact that price increase announcements should have had no impact on prices during this time period) and, on average, 2.6 percent above what supply and demand factors predicted after price increase announcements during the proposed class period (despite the fact that Dr. Lamb's overcharge regression purports to show an average overcharge of 9.6 percent during the proposed class period). (*See* Dkt. 624-2 at ¶ 171; Dkt. 624-3 at ¶ 124).

At the evidentiary hearing, Dr. Lamb did not dispute that the results of the price increase announcement regression and the overcharge regression were inconsistent, but instead argued that the inconsistency did not matter, because the purpose of the price increase announcement regression was not to measure an overcharge. This explanation was entirely unpersuasive. As Dr. Johnson explained in his sur-reply report, the difference between Dr. Lamb's overcharge regression and his price increase announcement regression is that he replaced the single overcharge indicator variable with different indicator variables for each of Defendants' price increase announcements. (Dkt. 541-1 ¶ 10). Given this fact, Dr. Lamb offered no cogent explanation for why his price increase announcement regression could not be compared to his overcharge regression for consistency, or for why

the patent inconsistency between these two models does not demonstrate that they are both methodologically unsound.

Separate from his price increase announcement regression, Dr. Lamb opined that Defendants' price increase announcements caused members of the proposed class whose pricing was tied to pricing indices to pay inflated prices because those indices "are based on transaction[s] subject to the allegedly anticompetitive price increase announcements." (Dkt. 624-2 at ¶¶ 21, 216-17; *see also* Dkt. 624-3 at ¶ 87 ("The widespread use of indices in the caustic soda industry means that price negotiations and spot sales would be anchored by the alleged Cartel and result [in] artificially inflated prices paid by members of the proposed class.")). However, that assertion is unsupported by the evidence of record. Dr. Lamb testified at his deposition that he did not know which customers' negotiated prices were reported to IHS<sup>10</sup> in any month during the proposed class period. (Dkt. 632-6 at 29). He further performed no analysis to determine whether the prices published by IHS, Argus, or ICIS accurately reflected actual negotiated prices for any month in the proposed class period. (*Id.* at 30). The record before the Court is also devoid of any other evidence regarding the manner in which particular negotiated prices from particular customers are incorporated into the variety of indices used by the class.

In other words, DPPs' theory for how price increase announcements caused injury to members of the proposed class with index-based pricing relies entirely on assumption

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<sup>10</sup> As noted earlier this Decision and Order, IHS, Argus, and ICIS are agencies that publish price information regarding the caustic soda industry, with IHS publishing three price indices (Dkt. 624-2 at ¶ 50).

and conjecture. There is no actual proof in the record—much less common proof—that any allegedly artificially inflated negotiated price was actually incorporated into an index, and that a member of the proposed class then paid an artificially inflated price based on that index. “[T]heory is not sufficient to satisfy Rule 23(b)(3)’s requirements. [DPPs] must provide properly analyzed, reliable *evidence* that a common method of proof exists to prove impact on a class-wide basis.” *In re High-Tech Emp. Antitrust Litig.*, 289 F.R.D. 555, 570 (N.D. Cal. 2013) (quotation and citation omitted and alteration in original); *see also In re Flash Memory Antitrust Litig.*, No. C 07-0086 SBA, 2010 WL 2332081, at \*8 (N.D. Cal. June 9, 2010) (“[A]ntitrust claims predicated on negotiated transactions, as opposed to purchases based on list prices, often entail consideration of individualized proof of impact.”).

The cases cited by DPPs do not contradict the Court’s conclusion. (*See* Dkt. 622 at 34-35; Dkt. 667 at n.17). In the in-Circuit case of *In re Ethylene Propylene Diene Monomer (EPDM) Antitrust Litig.*, 256 F.R.D. 82 (D. Conn. 2009), the court observed that “where other methods of common proof exist to show classwide impact such as lock-step increases of national price lists in an oligopolistic market, comparing ‘but-for’ prices with actual transaction prices is not the only way for plaintiffs to succeed in a motion for class certification.” *Id.* at 88; *see also Olean Wholesale Grocery Coop., Inc. v. Bumble Bee Foods LLC*, 31 F.4th 651,670 (9th Cir. 2022) (noting “the Tuna Suppliers’ use of price lists for their products”); *In re Broiler Chicken Antitrust Litig.*, No. 16 C 8637, 2022 WL 1720468 (N.D. Ill. May 27, 2022) (“the allegation here is that Defendants fixed a market price that was the starting point for negotiations across the market” (emphasis added)).

However, no such lock-step increases or national price lists exist in this case. To the contrary, the record before the Court shows that Defendants charged different prices to different customers and adjusted their pricing at different times and by different amounts. Moreover, and as discussed above, many members of the proposed class paid prices based on formulas related to indices, and there is no common proof that any of those indices were impacted by the alleged price-fixing conspiracy, much less that they all were.

The out-of-Circuit cases cited by DPPs also do not support their contentions. In *Kleen Products LLC v. Int'l Paper Co.*, 831 F.3d 919 (7th Cir. 2016), in addition to evidence of market characteristics, the plaintiffs' expert had "constructed a regression model to estimate the overcharges made possible by the conspiracy[.]" *Id.* at 924. The Seventh Circuit rejected the defendants' argument that it was "not enough for [the plaintiffs] to prove aggregate injury and one aggregate overcharge, without allocating how much of that overcharge was paid by each individual class member." *Id.* at 927. No such argument has been presented by Defendants in this case. Additionally, the plaintiffs' expert in *Kleen Products* had reviewed every contract produced by the defendants and determined that 96% of them contained provisions tying pricing to a single index, which index had a "tight correlation" to price increases by the defendants. *Id.* at 926, 928. The proffered common proof of antitrust impact in *Kleen Products* was very different from the evidence presented by DPPs.

The same is true of *In re Capacitors Antitrust Litig.* (No. III), No. 14-CV-03264-JD, 2018 WL 5980139 (N.D. Cal. Nov. 14, 2018), wherein the defendants, like the *Kleen Products* defendants, argued that the plaintiffs had to "prove that each and every putative

class member was harmed before certification can be granted.” *Id.* at \*7. Again, that is not the issue in this case. The *Capacitors* plaintiffs had presented a multiple regression analysis that the court found to be acceptable common proof of antitrust impact. *Id.* In addition, the record in that case included “guilty pleas in which defendants admitted their participation in a price-fixing conspiracy that had a substantial and intended effect in the United States.” *Id.* at \*8. Similarly, the court in *In re Chocolate Confectionary Antitrust Litig.*, 289 F.R.D. 200 (M.D. Pa. 2012), was presented with a multiple regression analysis based on which one could “reasonably conclude[] that all products sold by Defendants were subject to collusive price increases.” *Id.* at 221; *see also In re Polyurethane Foam Antitrust Litig.*, 314 F.R.D. 226, 250-67 (N.D. Ohio 2014) (rejecting challenges to the plaintiffs’ expert’s statistical analyses).

Turning to the specifics of the other alleged common proof identified by DPPs, Dr. Lamb has opined that there is a “pricing structure” in the domestic caustic soda industry. (Dkt. 624-2 at ¶ 200). “A pricing structure means that prices paid by purchasers for the same product from a single seller, or for interchangeable products from different sellers, tend to move together over time in response to common economic forces.” (*Id.*). However, Dr. Lamb acknowledged at his deposition that “the pricing structure and the correlation of prices . . . would exist in the absence of the [alleged] cartel,” because they simply “reflect[] how the market works for caustic soda.” (Dkt. 632-26 at 10). As Dr. Lamb explained, the pricing structure is “offered as evidence that if the cartel existed and raised prices, those prices would have been paid by all or nearly all class members.” (*Id.* (emphasis added)). In other words, in the absence of common proof of a mechanism whereby the alleged cartel

could have raised prices on class members with index-based contract terms, the existence of a pricing structure cannot demonstrate classwide antitrust injury.

The same is true of the characteristics of the domestic caustic soda market. Dr. Lamb has opined that factors such as “the domination of the market by the defendants, barriers to entry, fungibility of the same grade and concentration of caustic soda across producers, a lack of substitutes, and inelastic demand . . . facilitate the formation and aid in the maintenance of a conspiracy” and “are part of the common proof that a cartel would impact all or nearly all proposed Class members.” (Dkt. 667 at 14-15). The Court does not disagree that this evidence could potentially be considered on a classwide basis in considering whether the alleged cartel had the ability to enforce price increases classwide. However, it cannot—in the absence of Dr. Lamb’s statistical analysis—show on a classwide basis that the cartel actually was successful in artificially increasing prices, which is necessary for a showing of antitrust injury. *See Cordes & Co. Fin. Servs. v. A.G. Edwards & Sons, Inc.*, 502 F.3d 91, 106 (2d Cir. 2007) (“[T]he second element of an antitrust cause of action—‘antitrust injury’—poses two distinct questions. One is the familiar factual question whether the plaintiff has indeed suffered harm, or ‘injury-in-fact.’”). After all, and as Defendants correctly point out in their opposition papers, “[e]ach of the identified market characteristics [also] existed in one or both benchmark periods” (Dkt. 632 at 55), and no inflated prices are alleged to have existed during those time periods. *See In re Air Cargo Shipping Servs. Antitrust Litig.*, No. 06-MD-1175 JG VVP, 2014 WL 7882100, \*49 (E.D.N.Y. July 10, 2015) (“Because it only permits a debatable inference, . . . the court agrees with the defendants that [the plaintiff’s expert’s] market

analysis does not establish the fact of each plaintiff's impact on its own." (internal quotation marks omitted)).

In sum, DPPs have failed to demonstrate by a preponderance of the evidence that common questions will predominate over individual questions with respect to their proposed class. DPPs have not come forward with common proof sufficient to allow a trier of fact to conclude that all or most members of the class suffered antitrust injury as a result of the alleged cartel. Class certification would not be appropriate under these circumstances.

## 2. Typicality

In addition to failing to demonstrate predominance, DPPs also have not shown that their claims are typical of the proposed class. "Typicality . . . requires that the claims of the class representatives be typical of those of the class, and is satisfied when each class member's claim arises from the same course of events, and each class member makes similar legal arguments to prove the defendant's liability." *Marisol A. v. Giuliani*, 126 F.3d 372, 376 (2d Cir. 1997) (quotation omitted); *see also Dover v. Brit. Airways, PLC (UK)*, 321 F.R.D. 49, 55 (E.D.N.Y. 2017) ("Typicality is satisfied when the named plaintiffs bring claims for the same type of injury under the same legal theory as the rest of the class." (quotation omitted)).

Defendants argue that DPPs' claims are not typical of the proposed class because the record demonstrates that the three largest members of the proposed class [REDACTED]

[REDACTED]

[REDACTED] did not have the same price negotiation strategy as DPPs

and did not seek to pay the lowest available price for caustic soda. These putative class members have testified that: [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]. (See, e.g., Dkt. 680-10 at 9; Dkt. 680-53 at 10).

DPPs significantly oversimplify Defendants’ typicality argument in their reply, contending that “Defendants . . . argue that typicality is defeated here because some large class members may have factored into their purchasing decisions their need to preserve relations with their suppliers.” (Dkt. 643 at 56). But, as set forth above, that is not what Defendants have argued. Instead, Defendants have pointed out that: (1) DPPs’ theory of the case is that the entire proposed class was injured because the members thereof universally sought to pay the lowest possible price for caustic soda, and that lowest possible price was artificially inflated by Defendants via price increase announcements; and (2) the three largest members of the proposed class have all testified that they do not fit within that theory and were not injured in that manner. DPPs have failed to meaningfully address this argument and have accordingly not demonstrated typicality.

### **3. Ascertainability**

Finally, the Court concludes that DPPs’ proposed class does not satisfy the implied requirement of ascertainability, which requires that “a class be defined using objective criteria that establish a membership with definite boundaries.” *In re Petrobras Sec.*, 862



F.3d 250, 264 (2d Cir. 2017). “Where any criterion is subjective . . . , the class is not ascertainable.” *Flores v. Anjost Corp.*, 284 F.R.D. 112, 122 (S.D.N.Y. 2012).

Defendants argue that the proposed class is not ascertainable because DPPs’ proposed class definition “uses vague and ambiguous terms” such as “long-term fixed-price contracts” and “cost-based contracts.” (Dkt. 632 at 71-72). Defendants further argue that DPPs’ “definition excludes certain purchases as opposed to purchasers, which means that a single customer may have purchases under one contract that are in the class, and other purchases under a different contract that are not” and “[t]he only way to distinguish between qualifying and non-qualifying purchases would be to look at the contract terms.” (*Id.* at 72).

In reply, DPPs do not meaningfully engage with Defendants’ arguments. Instead, they say:

Seven hundred sixty-one (761) class members have been ascertained based on Defendants’ data. There is no ascertainability issue here. Defendants’ records also identify the entities whose purchases may be excluded from the class definition—those that made purchases pursuant to the terms of long-term fixed-price contracts predating Oct. 1, 2015, cost-based contracts with no reference to an index, and contracts priced on an ECU basis with no reference to an index. In other words, any purchaser-purchase combinations within Defendants’ data that are excluded from the class definition are not only objectively identifiable, they have been identified to the extent practicable at this time.

(Dkt. 643 at 61).

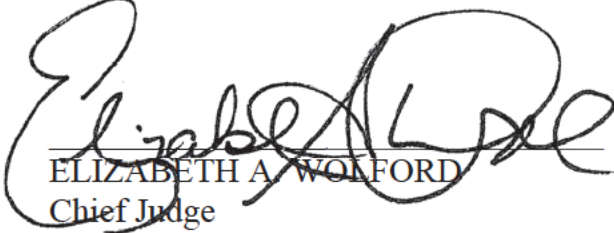
Nothing in DPPs’ reply addresses the fact that their class definition provides no objective criteria for determining what constitutes a long-term, fixed-price contract that predates October 1, 2015. The proposed class definition neither defines “long-term” nor

offers any explanation for how to determine whether a contract with pricing terms that vary over time predates October 1, 2015. To give an example of why this lack of clarity is problematic, the record before the Court contains several examples of contracts that have provisions that cause them to automatically renew from year to year unless cancelled by the parties. Is such a contract “long-term”? If it was entered into in 2012, does it “predate” October 1, 2015, or does each annual automatic renewal re-date it? And what if it provides for fixed prices for purchases in one location but for an index-based pricing formula for purchases in a second location? The lack of any objective answer to these questions renders the proposed class insufficiently ascertainable. This is an additional reason why the proposed class fails to satisfy Rule 23’s requirements.

### **CONCLUSION**

For the reasons set forth above, the Court denies DPPs’ motion for class certification (Dkt. 474); denies as moot Shintech’s motion to exclude certain of Dr. Lamb’s opinions (Dkt. 567); denies DPPs’ motion to strike and exclude certain of Dr. Johnson’s opinions and proposed testimony (Dkt. 570); denies as moot Formosa’s motion to exclude certain of Dr. Lamb’s opinions (Dkt. 572); and denies as moot Defendants’ joint motion to exclude certain of Dr. Lamb’s opinions and proposed testimony (Dkt. 573). The Court’s denial of the parties’ motions to strike/exclude shall not preclude the parties from raising any issues related to the admissibility of expert testimony in motions in limine filed pursuant to a pre-trial order entered at a later stage of this case.

SO ORDERED.



ELIZABETH A. WOLFORD  
Chief Judge  
United States District Court

Dated: December 28, 2023  
Rochester, New York